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ORIGINAL ARTICLES.

A CASE OF PARALYSIS OF THE SUPERIOR OBLIQUE IN NEPHRITIS.

BY HOWARD F. HANSELL, M.D., PHILADELPHIA, PA.

THE occurrence of sudden diplopia in a patient apparently in perfect health leads us immediately to the supposition that syphilis is the cause and, if we accept the statement of writers whose word is universally acknowled as authoritative, with good reason. Alexander ("Syphilis and Auge") quotes Graefe as recording the circumstance that over one-half of his cases of paralysis of the external ocular muscles was syphilitic in origin. His own figures are 269 cases of paralysis of which 53.5 per cent. were syphilitic. In his "Neue Erfahrungen," where he pursues the subject a little closer, he says: "Syphilitic paralysis of the trochlear nerve, which is, moreover, very seldom, is never found as an isolated paralysis but always in association with paralysis of the oculo-motor, the optic, the abducens or the facial. In non-syphilitic paralysis the lesion is often found in the Pineal gland." But cases are not rare where the history of infection is positively denied and where there is absolutely no reason to believe the patient's statements are untrue. Other causes are traumatism, rheumatism, diabetes, tumor, peripheral neuritis, posterior sclerosis, cerebro-spinal diseases and nephritis. Several cases of neph-

ritic paralysis have been recorded. Knies ("The Eye in Relation to General Diseases") has recently seen several cases. 1. Abducens paralysis as the sole symptom in albuminuria of fifteen years' standing, following typhoid fever; it relapsed twice in a few months and then the patient died. 2. Left trochlear paralysis in contracted kidney of unknown duration; death in three months; hæmorrhages were found in the right optic nerve. 3. Complicated external ophthalmoplegia. The paralyses usually recover rapidly but often undergo relapses in the same or other muscles. The cause generally appears to consist of a hæmorrhage in the region of the nerve-roots or nuclei, possibly even in the nerve itself. Sclerosis of the nerves was found by Leber.

A case at present under treatment may be properly added to the few that have been published. Mr. H., aged 34 years, married, applied to me February 1, complaining of double vision in the lower right-hand field. He attributed his trouble to close application to his office work. The symptoms of paralysis of the left superior oblique were complete. The false image was always below the true, sometimes directly under it and again crossed to the right side. V., $^{20}/_{XX}$ in each eye when corrected by a 1 D. Cylinder ax. 90. There was no *lesion of the eye grounds* and no limitation of the fields for white or colors. The only change noted during the next fortnight was an increase in the diplopsic field and a wider separation of the images.

The following notes of his general health have been kindly sent me by his family physician: The patient has had the ordinary diseases of childhood but has suffered from no condition within recent years that could have an influence upon his present illness. For the past five years, however, he has been troubled by obstinate constipation requiring the constant use of laxatives as well as a carefully selected and dietary and systematic exercise for its relief. While he had daily evacuations he felt in perfectly good health but if he allowed himself to become constipated he would experience headache, languor, a sense of abdominal distension, a disagreeable taste in the mouth, and a heavy odor to his breath. On February 1, an examination of his urine was made with the following result: Sp. gr. 1024, highly acid, albumen in large amount, granular epithelial casts, uric acid and crystals of calcium oxalate in

abundance. Two subsequent analyses showed a diminished amount of albumen although casts were still present, uric acid and oxalates having disappeared. Since February 7, three analyses have disclosed neither albumen or casts. In the early part of December, 1896, the patient had been examined and passed for life insurance, the same physician who has furnished the above facts had analyzed the urine and had found it normal in every respect.

The treatment consisted of a regulated diet and the administration of citrate of lithium and Bashaam's mixture.

Prolonged office hours, continued work at the near point, in the presence of uncorrected hyperopic astigmatism and the absence of out-door exercise with perhaps hurried and improper diet, contributed to the muscular paralysis by inducing exudation, fluid or solid, or hæmorrhage within the sheath of the fourth nerve or in its course at the base, in an individual whose nervous system was imperfectly nourished by blood, altered in its composition by reason of one of the chronic forms of Bright's disease. The absence of all retinal and optic nerve complications, found in 10 per cent. of cases of chronic nephritis, is an interesting fact, and may cast some doubt as to the causal relation of the kidney disease. Careful inquiry into the history and through physical examination, however, fail to demonstrate other causes and the acceptance of the diagnosis can not be held to be inconsistent with the conclusion, that the paralysis of the superior oblique has for its underlying cause the condition of the kidneys.

REPORT OF TWO CASES OF SCOPOLAMINE POISONING.

BY L. R. CULBERTSON, M D., ZANESVILLE, OHIO,

CASE I.—S. H., aged 28 years, suffering from neurasthenia, esophoria, accommodative asthenopia and hypermetropia. Instilled twice within an hour four drops of a one-fourth of one per cent. solution of scopolamine hydrobromate. Refracted eyes and she went home. When she returned several days later she said that when she went home she was very weak and felt for twelve hours as though she were sinking

away and breathing was slightly difficult. Her husband thought she was nervous and did not send for a physician and she was all right the next morning.

CASE II.—Mrs. H., aged 34 years; blond, florid complexion. Very susceptible to drugs. Has hypermetropia. Instilled eight drops in each eye one-fourth of one per cent. of a solution of scopolamine hydrobromate within an hour. In fifteen minutes after the last instillation and before complete cycloplegia, her face became very much flushed and she said she felt dizzy and faint, although she did not lose consciousness. I had her lie down, and as she said she could not take morphine because of idiosyncrasy, I gave her whiskey at intervals. After an hour and thirty minutes she recovered completely and flushing of face disappeared. While under the systemic action of the drug the mouth was dry, face flushed, pulse 50 per minute, shortly after, 60 per minute, and gradually rose to normal. Respiration 15 per minute, gradually rising to normal. No hallucinations or delusions.

REMARKS.—While this is next to atropine, the best cycloplegic we have, it is dangerous to those who possess an idiosyncrasy to this or any drug. One should always inquire as to idiosyncrasy to drugs, or use an extremely weak solution, or keep puncta closed during and after instillation. A number of cases of poisoning have occurred from its use and it behooves us to be on our guard in using it.

DETACHMENT OF CHOROID AND RETINA BY CONCUSSION.[1]

BY S. D. RISLEY, M.D., PHILADELPHIA, PA.

PATIENT, Mr. H., aged 29 years, was brought to me in consultation by Dr. Leavitt, of Trenton, N. J., November, 1896. He was suffering from violent left hemicrania which originated in the left eyeball. O. D. appeared healthy, V., $^{6}/_{IX}$, but was unduly sensitive to light which caused throes of increased pain in the left eye. The left eye was totally

[1]Read before the Ophthalmological Section of the College of Physicians of Philadelphia, February 23, 1897.

blind, but the iris acted consensually with that of the right eye, both to light and in accommodation. He gave the following history:

Two years ago, while gunning for ducks, a fellow sportsman discharged his gun heavily charged, with its muzzle but a few inches from the left side of his head. The report deafened him, he became giddy and nauseated, and placed his hand on his left eye with the impression that it had "bursted" and "was lying on his cheek." There was at first violent and distressing tinnitus, which grew slowly better for a few days but has persisted up to the present time. There was no discharge from the ear, and no evidence of a rupture of the *membrana tympani* could be discovered.

The vision in the left eye was much impaired immediately after the accident, but the eye was not painful. The vision, however, grew steadily worse, until in about a year there was no longer any perception of light, although he was constantly annoyed by photopsies.

The tension of the left eye was subnormal, but the ball was not soft. The cornea and lens were transparent, but only a faint red reflex could be obtained through the narrow pupil. The pupil dilated large medium under cocaine and homatropine. No view of the optic nerve was possible, but the retinal blood-vessels could be traced far forward over a dark red undulating surface, except in the upper inner quadrant of the ophthalmoscopic field, where they could be faintly discerned apparently in situ.

The case appeared to be one of detachment of both the retina and choroid.

The accident is certainly an unusual one. I know of no other instance of detachment of the retina from concussion. The total blindness is not readily explained except upon the supposition that there was at the time of the accident a retro-bulbar hæmorrhage also. It is probable that extensive detachment of the choroid and retina occurred at the time of the explosion, which caused the "bursting" sensation he experienced and the immediate impairment of vision; while the increasing blindness ending in total loss of light perception at the end of a year was due to atrophy induced by the retro-bulbar hæmorrhage.

ANOTHER CASE OF TUMOR OF THE PALPEBRAL (ACCESSORY) LACHRYMAL GLAND, INCLUDING SOME REMARKS ON TUMORS OF THE ORBITAL LACHRYMAL GLAND.

BY ADOLF ALT, M.D., ST. LOUIS, MO.

[*With Micro-Photographs.*]

IN NO. XII, VOL. X, of this Journal, pages 370 and 371, I reported a case of adeno-carcinoma of the *palpebral* lachrymal gland, which I then considered to be unique, as I could nowhere find the description of a similar case in the literature at my disposal. In making this statement I had in my mind the fact that the *orbital* lachrymal gland as far as I knew was not involved in this case. I have not, to this day, seen a report of a similar case. Tumors of the orbital lachrymal gland, of course, have been observed and examined histologically quite a number of times. My own experience in this direction includes up to date eight tumors of this, the main lachrymal gland. Seven of these I reported in a paper read before the National Association of Railway Surgeons, held in St. Louis, April 26, 1896.

I there stated (*Medical Review*, Vol. XXXIII, No. 20):

"It has been my good fortune to personally examine seven tumors of the lachrymal gland, three of which I have myself removed and reported in *Knapp's Archives* and the AMERICAN JOURNAL OF OPHTHALMOLOGY. I have of late again studied my specimens very carefully and with the following results: Five of the tumors may be considered as being to some extent of an epithelial character, two show no epithelial structure whatever.

"Of the five tumors showing epithelial structures there is only one in which this character is throughout the tumor the prevailing one. In fact, so closely does this tumor follow the normal appearance of the lachrymal gland that I described and published it as an adenoma. The connective tissue between the glandular structures is also increased, but not to any very large extent.

"The four other tumors which also show an epithelial character and which in their structure seem to be very much like those described by O. Becker as adenoids, are but little different from each other. The more I have studied them the more have I become convinced, that the epithelial tissue found in them must be looked upon as the remnants of the original glandular tissue which are in places somewhat hypertrophied, but that there is hardly any newformation of glandular tissue and that in consequence the real character of these tumors is not that of an epithelioma or a glandular carcinoma. The bulk of the tumors is made up of myxomatous and cartilaginous tissue, by which the glandular structures are widely pressed apart and probably have atrophied and totally disappeared in places. The epithelial tissue still found shows, as a rule, a glandular, tubular arrangement of the cells around an open lumen. There are here and there cystic enlargements, which show that some secretion has been going on, while the growth progressed. In some places small colloid bodies are found, probably metamorphosed cells.

"The sixth tumor of the lachrymal gland, which I examined was a spindle-cell sarcoma of the purest type. It consists simply of smaller and larger spindle-cells closely packed with no visible intercellular substance and some round cells in the younger portions. I may state, that this tumor had grown back into the orbit and produced a straight forward exophthalmus with absolute abolishment of the motility of the eyeball. The patient died later on of multiple spindle-cell sarcoma in all important organs.

"The last tumor of the lachrymal gland, I removed, was so soft, that when on incision the thin capsule was opened the contents oozed out as a granular sticky mass. As the forceps could nowhere get a hold of it, I had to squeeze it out before I could thoroughly remove the capsule. It proved to be a chondro-sarcoma. There is not a trace of glandular tissue to be found in this tumor. The only other tissue it contains is here and there a microscopical spicule of bone. There are also some colloid bodies in this tumor.

"The number of tumors of the lachrymal gland here considered is, of course, not a large one in itself, although not so small when compared with the whole number of cases reported in literature. Yet, with the exception of the case, which I

consider to be an adenoma, the remaining ones are chiefly characterized by connective tissue formation, not by an epithelial structure. I do not think, therefore, that I am wrong when concluding, that the tumors of the lachrymal gland very frequently take their origin in the interstitial connective tissue and only in the rarer instances are truly epithelial in character.

"Lymphoma, lymphadenoma, tubercular tumors and chloroma of the lachrymal gland, as have been described in a number of instances, I have not had an opportunity to see."

I have since had occasion to examine one other tumor of the orbital lachrymal gland, which will be reported elsewhere, and which proved to be a scirrhotic carcinoma.

I wish now to report a second case of tumor of the *palpebral* (accessory, conjunctival) portion of the lachrymal gland, independent of the orbital portion.

C. T., a negro, aged 29 years, came under my care on account of an ulcer of the left cornea, in September, 1896. He stated that three years previously he had been under the care of some oculist in Cincinnati for an ulcer of this same cornea and that the eye though quiet had been of little use to him. The present ulcer was superficially located in the old scar and healed promptly under treatment.

When the patient first consulted me I noticed that not only did his left eye protrude somewhat, when compared with its fellow, but this protrusion was apparently directly due to a swelling under the very loose upper lid, which occupied the outer third of it. When I lifted this lid up a flat, lobulated tumor was exposed of about the size of an almond, which was covered by the conjunctiva. This tumor was very painful to the touch and was evidently very hyperæmic. When I questioned the patient with regard to this growth, he stated, that he first noticed it four years previously and that the oculist who treated him three years ago, had wanted to remove it and that now he was ready to have it removed as it caused him considerable and almost continuous pain.

Just about this time I had carefully perused E. Bock's booklet on the lachrymal gland in health and disease (Zur Kenntniss der gesunden und kranken Thrænendruese. Wien, 1896, Josef Safar), in which this author gives the results of his especial examination into the conditions of the lachrymal gland (he speaks almost solely of the accessory one) in about

1,000 persons, with the anatomical examination of 10 orbitæ post-mortem. From his researches it seems that the accessory lachrymal gland (aside from the new-growths) is much more frequently diseased and swollen, than has been commonly known. This swelling of the gland may be due to acute and chronic adenitis, that is, a primary inflammation of the gland-tissue, or secondarily to inflammation induced by affections especially of the cornea or conjunctiva. In these cases Bock considers the glandular inflammation to be produced by microbic infection or irritation by microbic products by way of the excretory canals. He also states that the size of the acces-

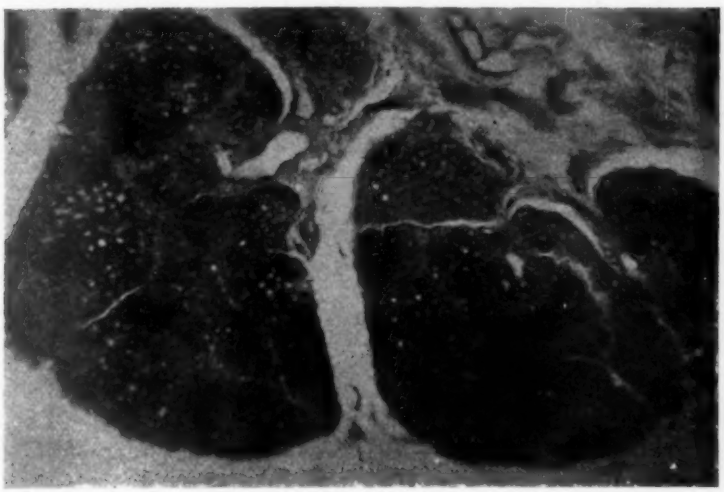

FIG. 1.

sory lachrymal glands varies considerably in health. Among 176 healthy individuals he found them invisible in 130 cases; visible in both eyes in 31 cases, the size varying from that of a pea to that of a bean. In 11 individuals the gland was visible on one side only.

Thinking of the possible connection between the ulcer of the cornea and the evident immense swelling of the accessory lachrymal gland in this eye, I questioned the patient very minutely, as regards the history of the growth. What I elicited, however, proved that I had to deal with a steady growth,

independent and apparently uninfluenced by the intercurrent ulcer of the cornea. The healing of the ulcer made no difference in the behavior of the growth.

At the patient's desire I removed this tumor a few weeks after the cornea was perfectly healed. The removal was followed by a very profuse arterial hæmorrhage which was stopped with difficulty only. The healing was uneventful and there has been no further trouble since.

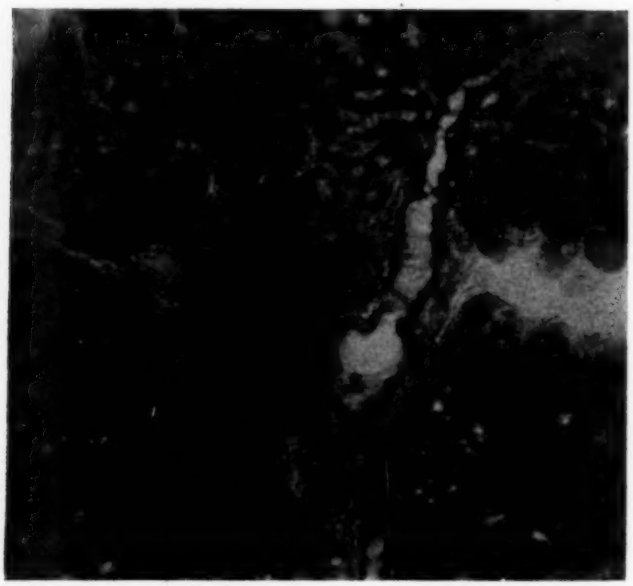

FIG. 2.

The size and shape of the tumor, when removed, was that of a small almond, thicker in its lower portion (near the conjunctiva). It was lobular in some parts, these lobules differing from the normal ones only by being larger, than what I have usually seen (Fig. 1). In another portion, the part which lay nearest the outer canthus, the growth was solid and nodular.

Microscopically the tissue consisted in the main of glandular tubules of three different kinds. First, remnants of the normal glandular tissue. These tubules retained a central lumen and they were more particularly situated near the secretory ducts; their cells appeared dimmed and granular and

their nuclei did not stain well, as if in the act of secretion. Second, tubules which appeared solid and without a central lumen. Their cells did not differ much from those of the normal parts. Third, a series of glandular tubules which had a very wide central lumen, sometimes forming cyst-like cavities (Fig. 4). The glandular tissue forms large lobules, yet there are smaller and very small ones, which may be newformations. This is, however, undecided, as very small glandular lobules apparently without canals are found also in the norm.

FIG. 3.

The connective tissue septa between the glandular tubules and the lobules had in parts almost disappeared, so that the tubules (Fig. 3) and formerly separated lobules touched each other; they were still in something like the normal breadth between the more normal lobules and near the excretory canals, where these were found. This connective tissue was filled with round cells, in some places in such numbers as to produce the picture of microscopical abscesses (Fig. 2). Round cells were also found throughout the glandular structures. The blood-vessels in the periphery were mostly very wide and filled with blood, within the glandular tissue and in the septa some were partially, some totally obliterated.

The conjunctiva covering the tumor was greatly infiltrated and the epithelial layer was several times its normal thickness. It, furthermore, abounded in mucous cells. These are the cells which are usually called goblet-cells, although the comparison with a goblet in this instance seems rather far-fetched. The cells in this case (and in a number of others of which I have sections) appear like balloons, tied at the end, where they lie at the surface (Fig. 5). They are stained deeply with hæmatoxyline or Bismark-brown, while with eosine or carmine they are barely tinted. Such cells were frequent also in the epithelium lining the excretory canals.

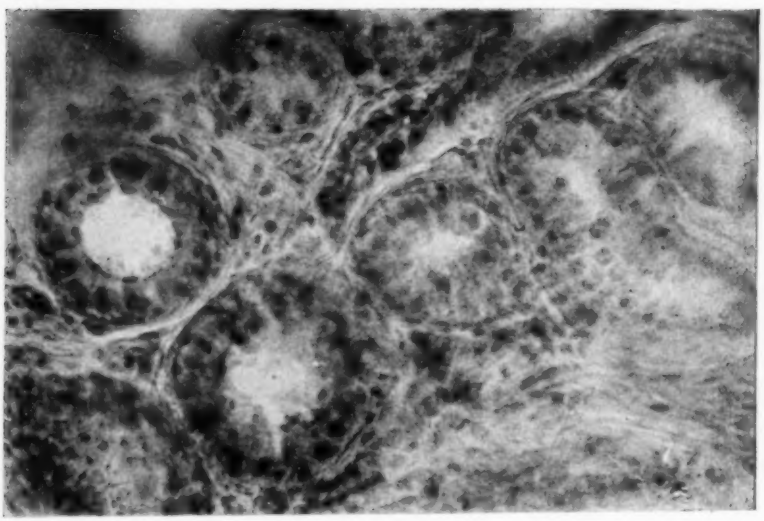

FIG. 4.

I consider this to be a case of *adenoma of the accessory lachrymal gland.*

Several other histologists to whom I showed specimens concurred with me in this opinion without hesitation. As I surely had not to deal with a normal, but overgrown, accessory gland, the question could but lie between dakryadenitis and adenoma. I think, however, that what I have described in the preceding pages can leave no doubt as to the nature of a pathological new-growth.

In confirmation of my view, I may here add what Ziegler says concerning the histology of adenoma:

"Adenomata differ from glandular hyperplasia macroscopically by the fact, that the new-growth is well differentiated from the surrounding tissues by its consistency, color and anatomical structure. They are usually nodular tumors which originate in glands or in mucous membranes and epithelial coverings which contain glands. In the first case, we find mostly but a part of the gland changed into a tumor-nodule.

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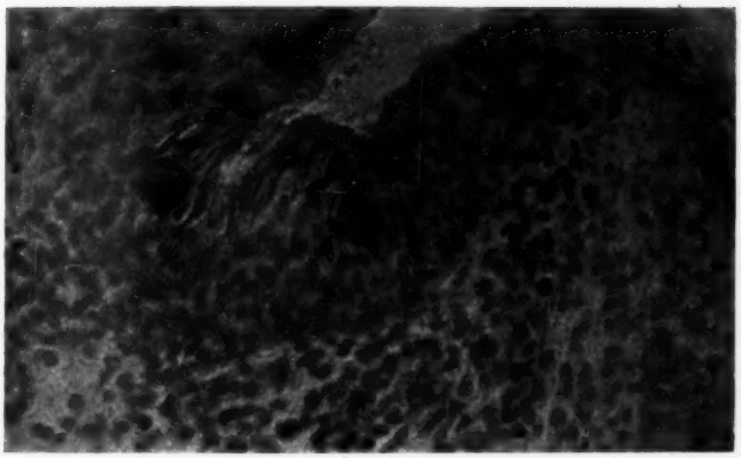

FIG. 5.

"The histological structure of the adenoma always differs more or less from the normal structure of the diseased organ. Although it forms a typical structure it is not exactly like its mother tissue."

Thus in the tumor under consideration we have swollen glandular lobules and a larger, harder nodule, which consists of glandular tissue differing, however, in structure from the mother tissue in that part of its tubules are solid, part have considerably enlarged lumina, so that we might almost speak of a cyst-adenoma.

A CASE OF CHLOROMA.[1]

BY S. C. AYRES, M.D., CINCINNATI, OHIO.

With Additional Microscopical Examination and Photograph.

BY ADOLF ALT, M.D., ST. LOUIS.

IT IS possible that the subject of chloroma is as new and rare to many of you as it was to me when the case I have to report came into my hands. It only came into my service at the Ophthalmic Hospital because the neoplasm had invaded the orbits and produced a marked exophthalmus. In the *American Journal of the Medical Sciences* for August, 1893, appears a paper entitled "Chloroma and Its Relation to Leukæmia," by Dr. George Dock, of Michigan, in which he reports a case. He has examined the literature of all languages and collected, including his own, seventeen cases of chloroma.

Edward Ludwig, aged 7 years, was admitted to the Ophthalmic Hospital May 18, 1893. His parents are living and in good health. There are five other children in the family, all of whom are healthy.

Previous History.—He has always been a bright, intelligent boy and has never suffered from any serious illness He has had repeated attacks of parotitis (?) and the present trouble seems to have followed one of these attacks. He at first complained of pain in both orbital regions, at the same time both eyes seemed to be more than usually prominent. After a week or more, his mother noticed some impairment of his hearing, which slowly increased The exophthalmus increased more rapidly. He became very weak and somewhat emaciated, and complained of a severe pain in the left foot, on account of which he was unable to walk.

[1]We republish this paper, read before the Section of Ophthalmology of the American Medical Association, May, 1896, and published in the *Journal of the American Medical Association* of November 7, 1896, at the express desire of our esteemed collaborator, as he hopes it will thus reach more readily a public to which it must be of especial interest and since a microscopic examination of parts of the tumor was offered us.—[Editor]

Upon his admission into the hospital both globes were very prominent, but the right more so than the left. It was with difficulty that he could close the lids of the right eye over the ball. The corneæ are clear and there is no impairment of vision. The conjunctivæ of both eyes are red and chemotic. The motility of the eyes is unimpaired. In the upper and outer portion of the right orbit can be felt a dense, inelastic growth which protrudes beyond the edge of the bone. A similar growth can also be felt in the left orbit, but not so pronounced. The optic papillæ are somewhat pale, but there are no other alterations in the fundus of either eye. His hearing is so much impaired that he has to be spoken to in a loud tone. Pulse, 120 per minute; temperature, normal. There is no lesion of any of the cranial nerves. Muscular power and sensation of both upper and lower extremities normal. Pressure on the sole of left foot produces pain, but there is no redness or swelling in this locality.

May 21. The proptosis of the right eye has increased, but that of the left is apparently slightly less. There has developed a swelling in both temporal regions. They are rounded and elastic, without any sensation of fluctuation.

May 23. Protrusion of both eyes increased; corneæ hazy and covered with inspissated mucus.

May 27. Temperature, normal; pulse, 120. Patient complains of some difficulty of micturition; later on, retention of urine. Both corneæ are quite opaque. The swellings in the temporal regions more pronounced. There has developed a hard, firm swelling in the region of each parotid gland. Intelligence good; hearing somewhat improved. Pain in foot still present. No appetite. The exophthalmus of both eyes increases day by day. Both globes are now forced beyond the palpebral fissure.

June 2. Condition worse in all respects. He has had a severe hæmorrhage from the conjunctiva of the right eye.

June 5. Died this morning as result of hæmorrhage from the conjunctiva of the right eye.

Three days before death, blood pale and watery. Staining according to the Ehrlich method showed a marked increase in the number of white blood corpuscles, the increase being due principally to the number of multinuclear cells, while the small lymphocytes and those white cells characteristic of splenic and myelogenic leukæmia are not increased. Eosinophile cells are sparingly present, not above 2 per cent. The examination of the blood at this time justifies the diagnosis of leucocytosis only, and not leukæmia. Furthermore, an

examination of the patient revealed no enlargement of the lymphatic glands except those of the neck.

The post-mortem examination was made about twenty-four hours after death: Body fairly well developed and nourished; post-mortem rigidity well marked, the upper and lower extremities normal. No evidence of subcutaneous hæmorrhages. Marked swelling of the lymphatic glands about the neck. Both eyeballs protrude to such an extent that they are are only partly covered by the eyelids; sloughing of both corneæ. Traces of blood about the eyes, mouth and nose. Mucous membrane of mouth swollen; teeth covered with blood. To the touch the lymphatic glands are firm and resisting, with no sign of fluctuation. A small nodular infiltration over the right parietal bone near the median line. On cutting through this swelling it was found to be situated beneath the periosteum, and although there was no evidence of its having arisen from the bone, the latter was at this point remarkably thin. No trace of inflammation or infiltration of the pia mater or the brain. The brain was found to be intensely anæmic. On removing the brain the orbital plates were seen to bulge upward owing to the pressure from within. After removing the very thin orbital plates, both cavities were found filled with a firm, solid, and somewhat elastic mass of a light greenish color, which pushed the eyeball forward. This mass was removed with some difficulty, although only at one point did it seem to be firmly adherent to the periosteum lining the orbital cavity. Here the bone was somewhat eroded. Behind, the new growth extended to the sphenoidal fissure, surrounding but not involving the optic nerve. In front and above, the newly formed tissue extended to and a little beyond the orbital arch. On superficial examination the new growth seemed to be confined to the orbital cavities; a further examination showed this not to be the case, for the cancellous tissue of the sphenoid and the petrous portion of the temporal bones were softened and infiltrated with a dirty greenish-yellow fluid, looking very much like pus. On the left side in the petrous portion of the temporal bone was an area in which the bone tissue was completely destroyed and filled up with a material such as was found in the orbits, differing from it only being of a more dirty greenish-yellow color, and not quite so firm. The lymphatic

glands presented the same appearance in section as did the tumors of the orbits.

Equally as interesting proved the further examination of the new growth. On having placed the tumor in alcohol, the color disappeared entirely within twelve hours. On the other hand, the specimen kept within a tightly corked bottle, still retains the greenish color; in fact, the color has become even more marked. Some of the fresh fluid taken from the interior of the sphenoid bone was examined, but revealed only the presence of large numbers of small corpuscles, fat globules and granular detritus.

The section of the tumor after being hardened in alcohol and ether seemed to justify the diagnosis of sarcoma, the cells being almost entirely of the small round variety, none or very few spindle cells, and remarkably little intercellular substance; no large blood vessels, but numerous lymph spaces. Furthermore, the small round-celled infiltration extended into the upper eyelid down to the yellow elastic cartilage.

The seat of the tumor, the peculiar color, the history of the growth, the remarkable involvement of the lymphatic glands, the results of the microscopic examination, make this case one of a few that have been put on record under the head of chloroma, cancer vert, the green cancer of the French.

Whether the form of tumor should be called a sarcoma, whether it is of the so-called connective tissue variety, or on the other hand, as Dock would seem to believe, a peculiar condition arising in the course of true leukæmia, the tumors being regarded in this case as lymphomata—these are questions which the future must decide. Dock and a number of others have found by an examination of the blood that they were contending with true leukæmia. My examination of the the blood, as already described, showed a remarkable increase of white blood corpuscles, but they were indicative only of a marked leucocytosis, and not a true leukæmia. This examination was made three days before death. However, there is still a great deal of obscurity about leukæmia as to its true nature, and when we consider that some writers have suggested the name of sarcoma of the blood for this disease, we can not wonder that in the case of chloroma the pathologic conditions found were suggestive of leukæmia.

I am greatly indebted to Dr. Greiwe for the above report

of the post-mortem and of his microscopic examination of the growths. His views, while they may differ from other investigators', are founded on examinations made of the neoplasm removed from different localities. It is very unfortunate that the post-mortem did not include the thoracic and abdominal cavities. A more complete examination might have thrown some light on the tissues invaded by this strange disease.

In all the prominent diagnostic points my case seems to correspond with the one reported by Dr. Dock, as well as most of those he has so carefully collected.

COLOR.—In color it was a yellowish-green, or perhaps a pea-green. It did not vary much in the different localities, but was more pronounced in the larger masses.

CONSISTENCY.—This differed in different localities. It was homogeneous and without fibrous septa. I have described the cut masses as presenting a smooth, shining jelly-like appearance.

INVOLVEMENT OF PERIOSTEUM AND BONE.—Most of the cases show involvement of the periosteum, and in this case it was marked, but more than this an actual softening of the bone. Dr. Greiwe in his report says that "the cancellous tissue of the sphenoid and the petrous portion of the temporal bones were softened and infiltrated with a dirty greenish-yellow fluid, looking very much like pus." On the left side in the petrous portion of the temporal bone was an area in which the bone tissue was completely destroyed and filled up with a material such as was found in the orbits, differing from it only by being of a more dirty greenish-yellow color, and not quite so firm.

DURATION.—From the report of the mother it seems that she noticed the exophthalmus only four weeks before she brought him to the hospital. He died in two weeks after he was first seen. Allowing two weeks to elapse in which the changes were not detected by the parents, the disease ran its course in the short period of two months. After he was first seen the growth was exceedingly rapid and could be noticed day by day.

HÆMORRHAGE.—Epistaxis is mentioned as occurring in some of the cases of chloroma reported. In Ludwig's case there was severe hæmorrhage from the conjunctiva of the right eye. This occurred in my patient the day before he died, and

then on the following day recurred with such violence as to destroy his life.

RETINA.—The eyes were carefully examined and no swelling of the optic discs and no retinitis was found. The discs were pale and anæmic, but not atrophied. His vision was good. In a short time the cornea became so involved that further inspection of the fundus was impossible.

EXOPHTHALMUS.—This was pronounced and was the first symptom that attracted the attention of his parents. The exophthalmus increased slowly in both eyes, but more in the right, and in a week from the time he was first seen the proptosis was so great that he could not close the eyelids, and in consequence the cornen ulcerated.

EXCITING CAUSES.—There is no known exciting cause in this case, but his illness followed an attack of parotitis. His mother said he had had several attacks of so-called parotitis. It is not probable that these attacks were true mumps, but precursors of the development of the disease.

DEAFNESS.—Deafness was a marked feature. It varied slightly in severity from day to day, and it was always necessary to speak to him in a loud tone. He had no catarrh and there was no otorrhœa The drum membranes were not examined.

Dr. Dock says: "From what we do know of the natural history of leukæmia and of chloroma we can see the analogies of the diseases. We can say that chloroma is a lymphomatous process similar in its clinical features to leukæmia and pseudo-leukæmia. Our ignorance of its precise relations depends partly on the fact that our knowledge of chloroma is very incomplete, partly on the indefinite nature of leukæmia and pseudo-leukæmia."

RESULTS OF THE MICROSCOPICAL EXAMINATION.

The parts of the tumor kindly sent me by Dr. Ayres were kept in a formol solution. They consisted of two pieces of the growth one larger and more consistent than the other. Both were of dark grass-green color. The preserving fluid also was dirty, greenish, and looked fatty.

After proper embedding I made sections of the larger and more solid-appearing piece.

In unstained sections the tissue is found to consist chiefly of small and larger round elements containing fat globules, although in one part of the tumor fibrous tissue predominates. The round elements seem to lie rather loosely together and are held by an intercellular substance which is hardly visible. Between these round cells which all have a greenish tint there lie aggregations of varying sizes composed of larger and darker bodies which are totally filled with or altogether consist of small fat or oil globules. Their shape is not exactly similar to any cell. These bodies are much more numerous in some parts of the tissue than in others. (See Figure).

The tissue takes up all the different kinds of staining materials, but poorly, nuclei can not be demonstrated and it does not photograph well therefore. Whether this is, as I should take it, a sign of partial disintegration of the tissue elements, or whether this is characteristic of the chloroma and due to the fat globules, I do not know. Yet, the latter is not probable, since the large bodies, more particularly filled with fat globules, take up more stain than the rest of the tissue.

When examining the preserving fluid in which the pieces of the tumor reached me, I found besides innumerable such

bodies with fat globules the whole green fluid pervaded by octahedric crystals of perfect purity, but varying in size. They are in no way different from crystals of oxalate of calcium as we find them in the urine. When I allowed the fluid to evaporate, larger droplets of a dark green oily substance and these crystals filled the field.

Ziegler says: "Chloroma is a round cell sarcoma very rich in cells, characterized by a light green or dirty brown-green color and which, according to our present knowledge, springs from the cranial periosteum. According to Huber and Chiari the coloring substance resides in small globules contained in the cells, which give the microscopical reactions of fat. I can confirm these statements from the personal examination of an orbital chloroma."

What I have found in the specimen under consideration differs from this description in so far only, as the aggregation of colored bodies consisting almost altogether of the globules, (as in the illustration here added), are not mentioned.

What significance, if any, the oxalate of calcium crystals present as to the nature of the disease, I do not venture to say.

A BRIEF NOTE UPON A PERFECTED SERIES OF TEST-WORDS INTENDED FOR THE DETERMINATION AND ESTIMATION OF THE POWER OF ACCOMMODATION. By CHARLES A. OLIVER, M.D., (*Archives of Ophthalmology*, No. 2, 1896).

Dr. Oliver, after ten years of constant employment of his series of metric test-letters presents a perfected series. The change in the order of the words; the substitution of a black hardwood frame for the gray cardboard mat; the exchange of the movable blocks of letter groupings to a single exquisitely etched steel plate; the fine white tint, and the even, unpolished, smooth surface of the printed area; and the clear, cleanly cut imprint of the engraved letters with a dead black ink, may all be cited as some of the most important reasons why this series has been issued. Made by Wall & Ochs, 1702 Chestnut Street, Philadelphia.

SOCIETY PROCEEDINGS.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

EDWARD NETTLESHIP, F.R.C.S., President, in the Chair.

THURSDAY, JANUARY 28, 1897.

Spontaneous Recovery of a Retinal Detachment. By DR. LAWFORD KNAGGS.

A woman, aged 21, was shot in the right temple on May 21, 1892. The bullet passed below the right orbit and lodged in the floor of the left antrum. The wound healed quickly. Attention was drawn to the right eye by the patient's complaints of inability to see things in certain portions of the field. Two choroidal ruptures near, and œdema around, the macula, and several large hæmorrhages were seen on the 22nd, and from that date till the early part of July an acute attack of central choroiditis, with much effusion, was observed in its various stages. At the latter date a large mass of white lymph occupied the vicinity of the macula, and was surrounded by a broad frame of pigment, over which several vessels curled, to be buried beneath the mass of lymph. On July 27, a detachment of the retina had formed, which, when seen end-on, was of the shape of a wedge of cheese with its apex uppermost. The top of the detachment formed a ridge, which ran horizontally backwards till it merged in a track, which disappeared beneath the inflammatory mass overlying the macula. The front of the detachment probably reached to the ora serrata. The field showed scotomata corresponding exactly to the central mass and the detachment. The patient was not seen again till November 28, 1894, when the detachment was found to have disappeared completely, and the reapplied retina to be quite normal in appearance. The central mass had become

more triangular in shape, but the track which had led to the detachment was still visible. The scotoma caused by the detachment had gone, and that dependent on the central disturbance had slightly contracted. Central vision was destroyed. The condition was unchanged some time later. There could be no doubt that the detachment was produced by exudation gravitating after expression from the central mass of inflammatory tissue, or possibly from a concealed detachment behind it. A detachment produced by inflammatory serum, whose natural tendency was towards absorption, differs essentially from a detachment where the subjacent fluid is a passive effusion filling a potential vacuum. Detachments of the retina are divisible into three groups:

1. Those occurring in fairly healthy eyes as a result of concussion in some form, as in coughing, blows.

2. Those where it is the direct result of inflammatory effusion dependent on severe traumatism or on some organic disease.

3. Those met with in eyes which are the subjects of some chronic disease, such as myopia, where degenerative as well as inflammatory changes may share in the production.

In Groups 1 and 2 spontaneous recovery is more probable and surgical treatment more hopeful (in suitable cases) than in Group 3. These statements were illustrated by reference to recorded cases.

Remarks were made by the PRESIDENT and MR. CANT.

Retention Cyst of the Lachrymal Gland or "Dacryops." By MR. ARNOLD LAWSON.

The patient was a young married lady, aged 19. The tumor had been growing for about four months when first seen. It caused a swelling in the upper and outer part of the left upper eyelid, and was accompanied by considerable ptosis, slight proptosis of the globe downwards and forwards, and slight limitation of movement upwards. On raising the upper lid a soft elastic tumor immediately bulged forwards between the lid and the globe. The tumor was obviously cystic, and had a dark bluish appearance. The skin moved freely over it. There was no glandular enlargement, no pain, and the general health was excellent. The tumor, which grew rapidly whilst under

observation, was removed by dividing the external canthus, and having by this means everted the lid, an excision through the fornix conjunctivæ completely exposed the anterior surface of the tumor. It was then shelled out without much difficulty. It lay perfectly free and non-adherent, except along its anterior surface, where it was attached by tags to the sub-conjunctival tissue of the lid and at its outer margin where it seemed to be adherent to the lachrymal gland. The cyst measured 40 mm. in length, and 22 mm. in breadth at its thickest part, and bore a remarkable resemblance in size and shape to a pigeon's egg. Its walls were of extreme delicacy and very translucent. It proved to be an unilocular cyst with a very shaggy inner wall, and contained about ℥ij of a pale straw-colored limpid fluid with a small sediment. Microscopically, the cyst wall was found to consist of a very delicate, loose, wavy, and elastic areolar tissue, denser and more felted toward the external wall. There was a remarkable absence of the cellular element, and it was only after repeated examinations of many sections that any cells could be found lining the cyst wall. Ultimately a few clusters of very minute cells with large nuclei were found scattered here and there in a few of the sections. The cells were of irregular shape and grouping, but strongly suggested a glandular origin. The cyst fluid was neutral, of a light specific gravity, and contained a fair amount of albumen, and a distinct trace of chlorides. The chief feature of the fluid was the presence of numbers of homogeneous bodies presenting great variety of size and shape. They were almost transparent, but stained readily. There were also present large numbers of leucocytes and red corpuscles, both floating free and also adherent to the bodies and embedded in them. The presence of fibrin in these bodies was demonstrated by staining after Weigert's method, and they were considered to be probably small detached masses of an albuminous nature, which had been coagulated, the precipitation of the albumen being brought about by the presence of alcohol, in a weak solution of which the cyst was lying for some days before examination, and the coagulation resulting from the formation of fibrin from the blood elements in the cyst. This theory was supported by the constant presence of adherent and embedded leucocytes in these bodies. As a further explanation, a positive analogy was suggested between

the bodies and hyaline casts, probably derived from some proteid of the renal epithelium, the urine in which they were found being nearly always albuminous. The presence of the epithelial lining to the cyst, the glandular type of the cells, the situation of the cyst, the presence of sodium chloride in the fluid, and the limpid character of the fluid itself, point very strongly to its being a retention cyst of the lachrymal gland, a disease of extreme rarity. A parasitic origin was suggested for the cyst on account of the curious bodies in the fluid, but the nature of the cyst wall placed such a diagnosis out of the question.

Remarks were made by MR. MARSHALL.

Card Specimens. The following were the card specimens:

DR. MACNAUGHTON JONES: "Case of Congenital Closure of the Lachrymal Punctum, and Absence of the Canaliculus." MR. WORK DODD: "Peculiar Changes in the Fundus Oculi." MR. JULER: "Changes in the Macula." MR J. GRIFFITH: "Arrest of Development of Lens." MR. DOYNE: "Retinal Hæmorrhages." MR. TREACHER COLLINS: "Hæmorrhage Into the Sheath of the Optic Nerve." MR. JESSOP: "Detachment of the Retina." MR. HIGGINS: "Two Eyes Lost by Spontaneous Hæmorrhage After Extraction of Cataract."

OPHTHALMIC DIGEST.

By J. Ellis Jennings, M.D., St. Louis, Mo.

RECURRENT PTOSIS. REPORT OF A CASE, WITH ANÆSTHESIA OF SUPRAORBITAL BRANCH OF THE FIFTH CRANIAL NERVE. By W. H. Haynes, M.D. (*New York Medical Journal*, Feb. 13, 1897).

Kate T., eleven and one-half years of age, a bright school girl of Brooklyn, with a negative family history, and a medical history of attacks of whooping-cough, measles, and chicken-pox, with attacks of headaches at times. In September, 1896, one week after school opened, felt headache in the top of her head and over eyes, without nausea, and mother noticed that she did not open her right eye, which was full of water; lids stuck together on awakening in the morning, eye felt sore, and it was thought she had taken cold. Four days later, I saw her and the following conditions were noticed: A well-nourished girl, suffering pain in the top of her head and right eyeball; says sight of that eye is foggy. Right upper eyelid covers upper half of that eyeball. There is no discharge present, but there is loss of tactile and pain sense throughout the right half of the forehead and temporal region covering the distribution of the supraorbital branch of the trifacial nerve of that side. Otherwise she is perfectly well.

The diagnosis of migraine with ptosis and anæsthesia of supraorbital branch of the fifth nerve was made and treatment given, first of bromide of sodium, then of arsenic, without apparent benefit, and finally at Dr. John C. Shaw's suggestion, $^1/_{200}$ grain of aconitine (Duquesnel's), three times a day, which caused disappearance of the pain and apparent gradual recovery of power over eyelid; so that six weeks after attacks began she could elevate the lid as well as the other; sensation had wholly returned; still had slight pain in eyeball, but no discharge or sticking, and sight is perfectly normal.

This is eminently a disease of childhood and youth. The attacks are usually ushered in suddenly, with neuralgic pains headache, nausea and vomiting. Soon after, the paralysis of one or all branches of the motor oculi appears, when all the symptoms except the pain may cease. After a shorter or longer interval (a few days to a few months) it disappears for a time, to be followed after a few weeks', months', to a few years' interval by a recurrence. The attacks may be accompanied by photophobia, swelling of lids, catarrhal or purulent discharge, paralysis of the other eye muscles, and rarest of all, anæsthesia of any or all of the branches of the fifth cranial nerve, which appears on the same side as the pain and oculomotor paralysis.

The pathology of this disease as given by Dr. P. C. Knapp is as follows: "The most tenable hypothesis is, that recurrent motor-oculi paralysis is due to some vascular change, inflammation, or œdema in a focal lesion, involving the root of the third nerve. As the œdema or exudation subsides, the conducting power of the nerve is wholly or partly restored and the paralysis disappears. In some cases the lesion may involve several nerves or the exudation may effect only a part of the lesion, involving different nerves at different times. As the lesion progresses, it may finally affect the nerve so far as wholly to destroy its conducting power, leading to permanent and total paralysis. The three reported autopsies confirm this hypothesis.

ŒDEMA OF THE OCULAR CONJUNCTIVA. By F. W. HIGGINS, M.D. (*Journal of the American Medical Association*, November 21, 1896).

One of the most constant symptoms of Bright's disease is œdema. Puffiness under the eyes is perhaps the symptom that the physician first looks for in a suspected case. That to which I wish to call attention is the much rarer condition of œdema of the ocular conjunctiva. Œdema may occur in any locality where there is cellular tissue, often without our being able to determine just why it is so especially marked in the location where we find it.

Some time ago I was called into the country to see a patient confined to the house by nephritis, exhibiting a peculiarly

marked case of ocular œdema or chemosis. The invalid was a married man, aged 22, a telegraph operator. Four years before, he had been suffocated by coal gas and remained unconscious for some hours; to this circumstance he ascribed his illness. He had been treated for albuminuria, in Michigan, for about two years, when he returned to New York State to place himself under the care of a professional relative, for whom I examined the eyes. I found the young man in bed, pale, with general anasarca, the urine loaded with albumen, and all the symptoms of a parenchymatous nephritis. He was totally blind, not, as you may suppose, from albuminuric retinitis, but from œdema of the ocular conjunctiva. This had first formed a chemosis, then had increased until the raised folds met over the cornea. These swellings were red, not having the pale, translucent appearance one might expect. In each eye they presented the aspect of a superior and inferior fold—like distended lids. The mucous membrane was dry and appeared thickened from constant contact with the air. The lids could not be closed One would estimate that four drams of fluid was included in each eye.

The treatment was incisions, made, I must confess, too cautiously the first time, for my attention had never been called to a chemosis of any such extent, and I did not know what pathologic condition might be concealed beneath. The oozing of serum was slow, but sufficient to enable the cornea of one eye to be seen at my next visit. The incisions were repeated with the effect of enabling me at my third visit to examine the fundus, which I found almost filled with white patches of choroidal change, which we might call œdema of the choroid.

Now a peculiar complication occurred. The cornea was no longer completely covered by the folds, and still the œdematous and thickened conjunctiva prevented the lids from closing, which compelled me to give directions in regard to the cornea, to prevent damage from exposure.

I saw him no more, but learned that he had uræmic convulsions, after which sight and general symptoms improved, and he returned to Michigan. Here the conjunctivæ were treated by cautery, but the patient died about three months after I last saw him.

I am not able to give any reason why the ocular conjunc-

tiva should have become so infiltrated in this case. No iodide of potassium had been administered, or any other treatment that could induce it. There was no history of a previous affection of the eye. No discharge or symptoms of gonorrhœa.

Professor Schiess, writing in 1870, thinks the subject of conjunctival œdema has been neglected. He would ascribe all such cases as my own to preceding choroidal changes interfering with return circulation. I noticed that the retina could be seen with a plus glass in my case, but neglected to record the strength of it. According to Professor Schiess' view the pathology of my case would be that excessive infiltration of the retina and choroid first occurred, which caused passive congestion of the anterior portion of the eye, with exudation of serum and leucocytes. That there was a subacute inflammatory condition he would predicate from the dark red color of the mucous membrane and the thickening of the tissues. With this condition of the conjunctiva present, he would assume the presence of choroidal disease.

IRRITATIVE RETINITIS. By FRED. BAKER, M.D. (*Southern California Practitioner*, February, 1897).

Very soon after beginning ophthalmic practice in Southern California I was struck by the fact that we meet here a smaller percentage of grave ophthalmias and trachomatous diseases, including secondary involvement of the cornea, and a much larger percentage of eye-strain, and of those conditions which can in any degree be referable to the irritation of bright light. The following case is an extreme type of the latter condition: March 1, 1890, Lizzie M., came to my office with marked symptoms of asthenopia, headache on use of eyes being almost constantly present. Tests showed about 1.75 D. of hyperopia. Vision of each eye was $^{5}/_{V}$ —. The ophthalmoscope showed only slight choroidal and retinal congestion. I instilled atropine, found somewhat increased hyperopia, which I corrected with glasses. Twelve days later, she reported at my office free from headache, but vision of each eye had fallen to one-third of normal, and there was some photophobia which had not been present before. The choroid and nerves were nearly normal, but through the retina, mostly following the lines of the main vessels, and overlying them, were

hazy, blue-gray deposits suggesting spatter-work. I learned that my patient had absolutely disregarded my orders about shading the eyes, and I have no doubt that it was a case of retinitis due to irritation of the excess of light admitted to the retina by the dilated pupils. Treatment consisted in full doses of iodide, rest and protection of the eyes, continued for about six weeks, which brought vision to normal.

The process seems to be a sharp choroido-retinal congestion, then serous infiltration, and finally, organization of lymph into the localized patches, which become ultimately points of atrophy with connective tissue proliferation. In untreated cases, and those where vision is considerably impaired permanently, there are irregularities in the visual field. I have seen no case of marked scotoma; but by careful testing, spots of lessened clearness, with visual distortions, can often be demonstrated away from the line of most distinct vision.

The prognosis under treatment is generally good.

ALTERNATING CONVERGING SQUINT, OPERATED ON BY ADVANCEMENT OF THE EXTERNAL STRAIGHT MUSCLES; SUPPURATIVE TENONITIS; PERFORATION OF THE EYEBALL.

By JOSEPH A. WHITE, A.M., M.D. (*Virginia Medical Semi-Monthly*, November 27, 1896).

Operations on the eye-muscles, whilst comparatively free from danger when properly done, are never altogether free from risk, even under strict antiseptic precautions, as may be shown by the case of the young lady now presented:

Miss L. C. T., came to see me March 6, 1896. The vision of the right eye was $^{20}/_{XXX}$, and the vision of the left eye was $^{20}/_{XL}$; H = + 1.25 R.; + 1.50 L., gave $^{20}/_{XX}$ and $^{20}/_{XXX}$. The deformity was so great that the eye that turned in invariably had one-half of the cornea concealed. I cut in turn both the internal recti, without much improvement in the deformity. I then advanced the external rectus of the right eye. Some weeks later (March 30), I advanced the external rectus of the left eye. These operations were done with the most approved antiseptic precautions, instruments thoroughly sterilized, and in both the operations the eye was flooded with a solution of bichloride of mercury, 1 to 2:000. In spite of this, the second

advancement was followed by a suppurative tenonitis. (This was interesting to me, because it was the only case I had ever seen, and its origin was obscure). The patient suffered much pain from time to time, and the eye discharged a great deal of pus, oozing out from under the tendon of the muscle, as if there was a pus cavity between the sclerotic and capsule of Tenon. The suppuration continued in spite of all treatment through the month of April, and it was late in May before perfect healing resulted.

On Tuesday, May 26, as the deformity was still very pronounced, although much improved, I decided to advance the same tendon that had suffered from the suppuration. I found no difficulty in picking up the muscle, and carefully separated it from the sclera; but as I uncovered the latter I observed that it seemed very thin, and at the lower part of the attachment of the muscle the moment the tendon separated from the eyeball I discovered that the sclera was entirely destroyed, and that the muscle was adherent to the uvea, which ruptured as soon as it was exposed, the vitreous protruding through the opening. The suppurative process had practically destroyed the tough fibrous sclerotic coat, leaving as the only support for the vitreous humor the uvea attached to the muscle. I at once passed a silk suture from without inwards through conjunctiva capsule, muscle, uvea, etc., and carried it through the conjunctiva as close as possible to the cornea, tying it firmly. She suffered considerable pain from time to time for four days after the operation, but no other unfavorable symptoms were manifested. I treated it as I would a cataract extraction with prolapse of the vitreous, and on the fourth day I found the eye doing well. On the sixth day I removed the stitch. The eye was then somewhat angry looking, with a slight apparent divergence; the cornea was clear; pupil freely acting, and vision for ordinary purposes fairly good. The ophthalmoscope showed faint cloud of vitreous with decided opacity in vicinity of the wound. On June 15 eyes were seemingly straight. There was slight hyperphoria and esophoria. Vision R. was $^{20}/_{XX}$, with + 1.5 D.; L., $^{20}/_{XXX}$, with + 1 D. $\bigcirc$ + 0.75 D. c. ax. 90°. Opacity of vitreous was still marked in vicinity of wound.

PAMPHLETS.

"Granular Lids." By D. S. Reynolds, M.D.

"The Modern Treatment of Tuberculosis." By Paul Paquin, M.D.

"On Cyclone-Neuroses and Psychoses." By Ludwig Bremer, M.D.

THE NEW AMSTERDAM EYE AND EAR HOSPITAL.

The New Amsterdam Eye and Ear Hospital, which will complete its ninth year on May 1, 1897, now situated at 212 W. 38th Street, will move on that date to its new home at 230 W. 38th Street.

A special meeting of the Board of Trustees was held on Tuesday, Febrnary 7, to formally accept the new premises, Nos. 230 and 232 W. 38th Street, which had been purchased by the Executive Committee. The meeting was a very enthusiastic one; the action of the Committee was approved and confirmed by the Board, and the occasion was one of general congratulations. It is the intention of the management to begin at once to make extensive changes and alterations on the house No. 230 to make it in every way commodious and convenient for their purposes.

An extension of two stories will be built for a dispensary, several dark-rooms, an ample waiting-room and drug store, on the first floor, and on the other an operating room, room for examining refraction, and for the use of the optician. All of these improvements will be made in such a way as to secure to the medical staff a series of rooms in which to carry on their work, not to be surpassed in the city.

This Institution has rapidly grown in favor on the west side of the city, and as the eighth annual report shows, has also greatly increased in the numbers which apply for treatment. It is the intention of the Board of Trustees to open the new departments to public inspection as soon as they are completed which will be in the early fall.

At the Fourth Session of the Congress of American Physicians and Surgeons at Washington, May 4–6, a discussion will take place on "The Gouty and Rheumatic Diathesis and Their Relation to Diseases of the Eye."